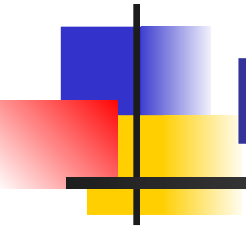
Transaction Processing Metrics



Presented by

Northrop Grumman

April 1, 2004

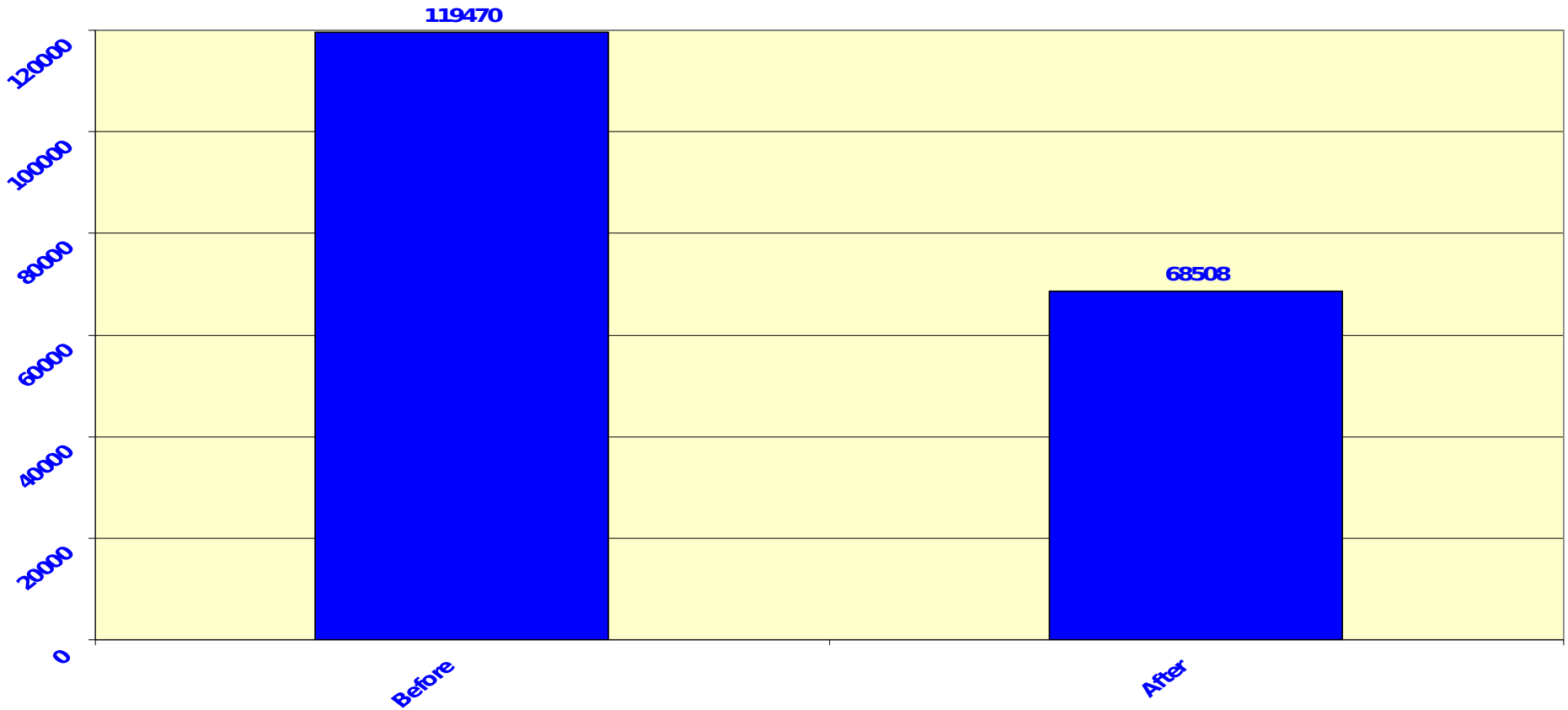
Overview

- Mismatches overall
- Before and After Reprocessing Specifics:
  - Mismatched Transactions
  - Posted Transactions
  - Special Shipping Instructions
- Analysis
- Trends

Mismatched Transactions

- Reprocessed Mismatches between 2001 and 2003.
- Resolved 50,962 mismatched transactions
- OR 43%

Mismatched Transactions

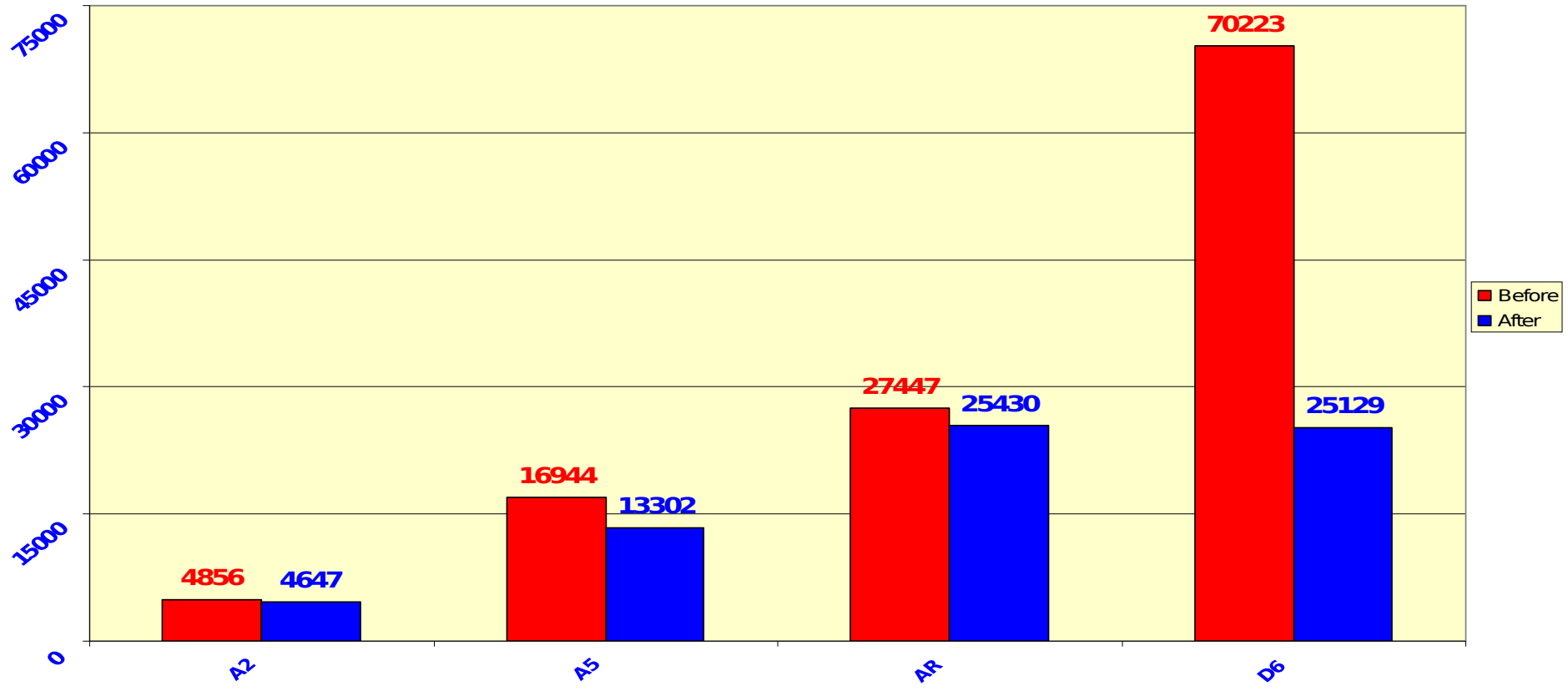


Reprocessing

Mismatched Transactions Detailed View

- Closer Look at 68K mismatches
- Before Reprocessing
  - Excessive Material Receipts (60%)
  - Material MROs and Confirmation volume is high
- After Reprocessing
  - Significant Reduction in Receipts (64%)
  - Minor impact to MROs/Confirmations

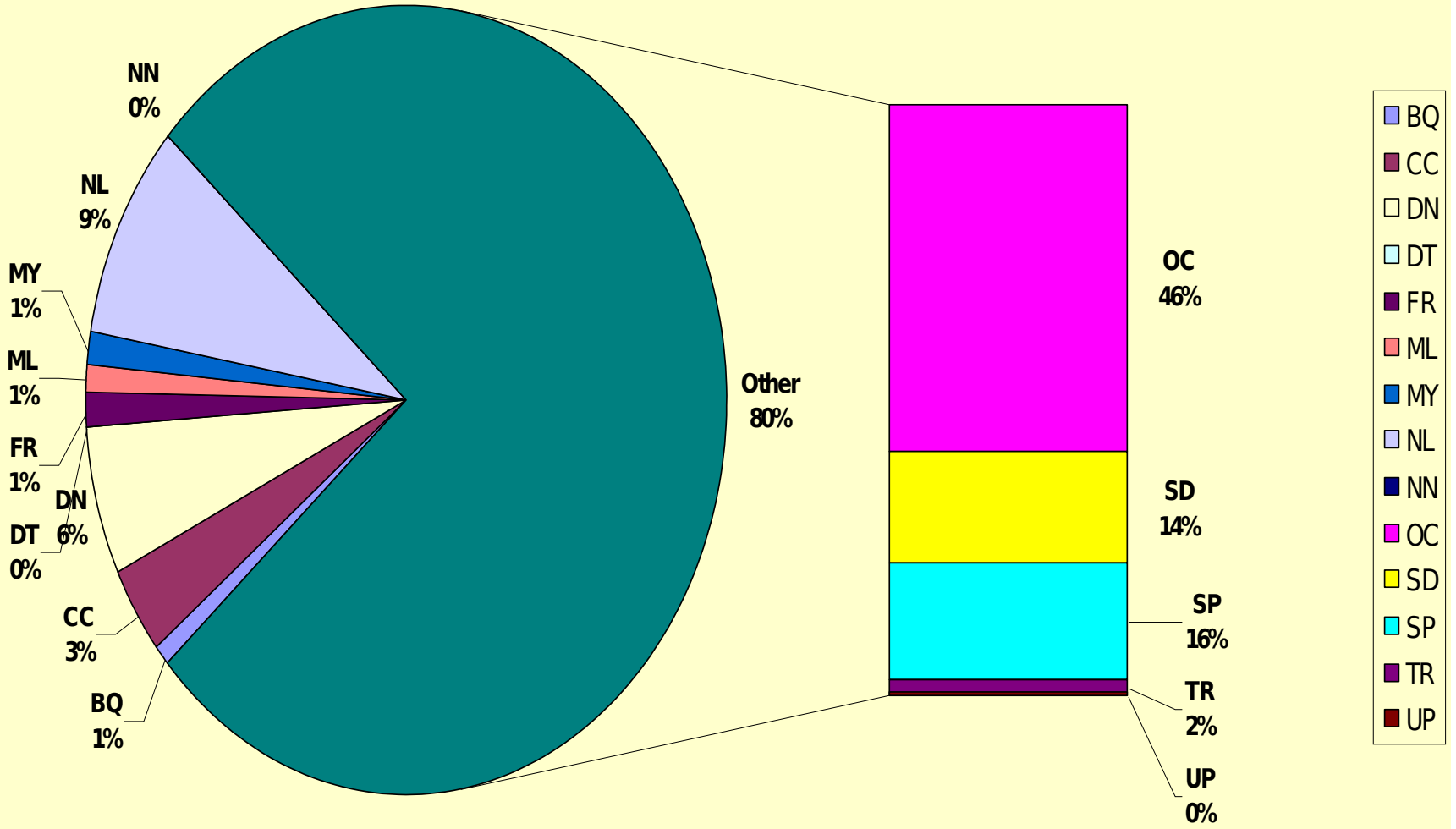
Mismatched Transactions



Before Reprocessing Transaction Mismatches

- Pie Chart Reflects the State of IMACS before reprocessing.
- 80% of Mismatches Types consist of:
  - Ownership Code (OC),
  - Shipping Document (SD),
  - Supplementary Dodaac (SP),
  - To Routing Identifier Code (TR), and
  - Unit Price (UP).

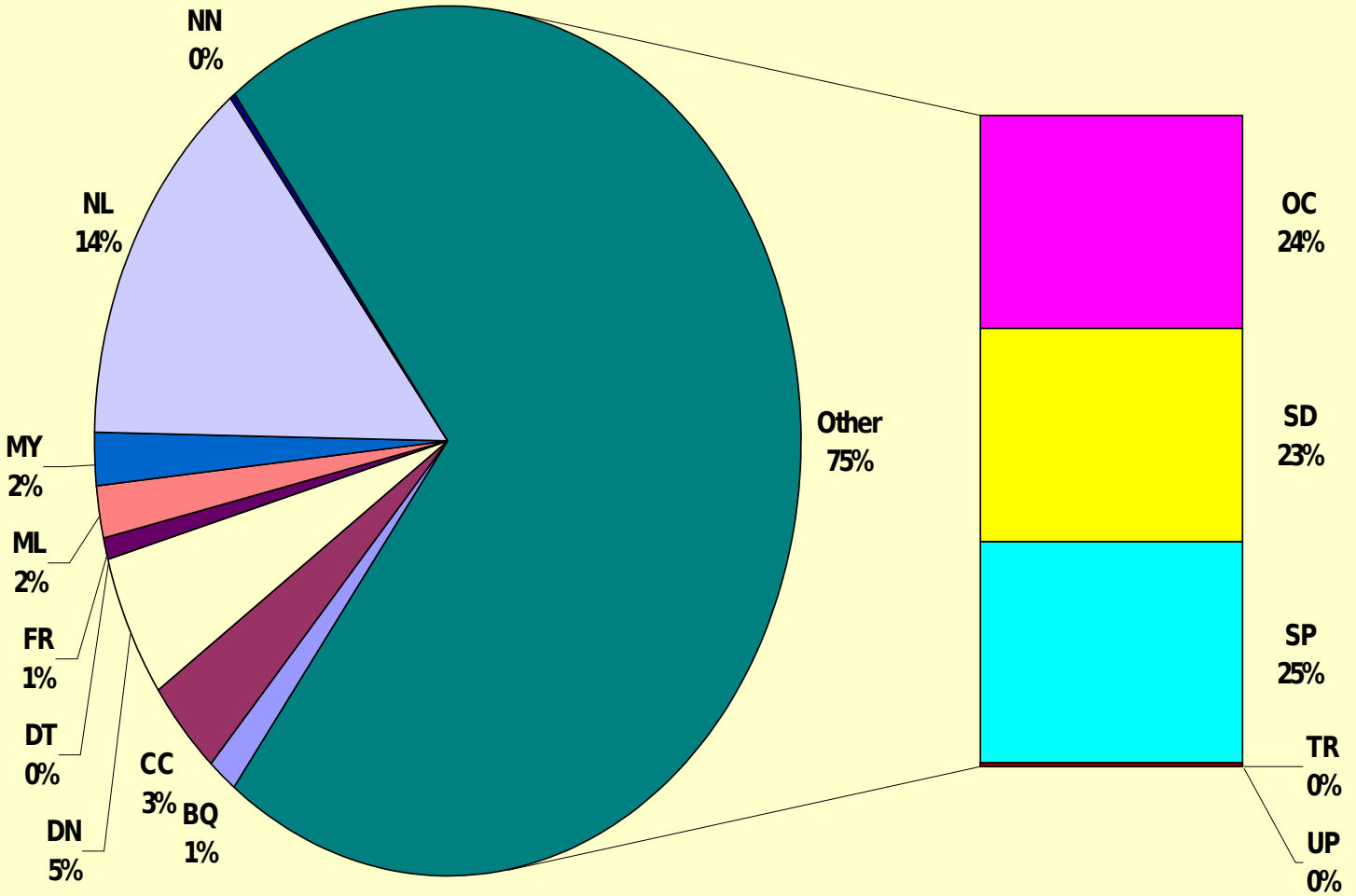
Before Mismatch Reprocessing



After Reprocessing Mismatched Transactions

- Significant changes in “OC” mismatches (22% reduction)
- Increases in:
  - “NL” – 5%
  - “SD” – 9%
  - “SP” – 9%
    - SD and SP (DoDaacs not in IMACS database) are being resolved by Bill Eby with DAAS)

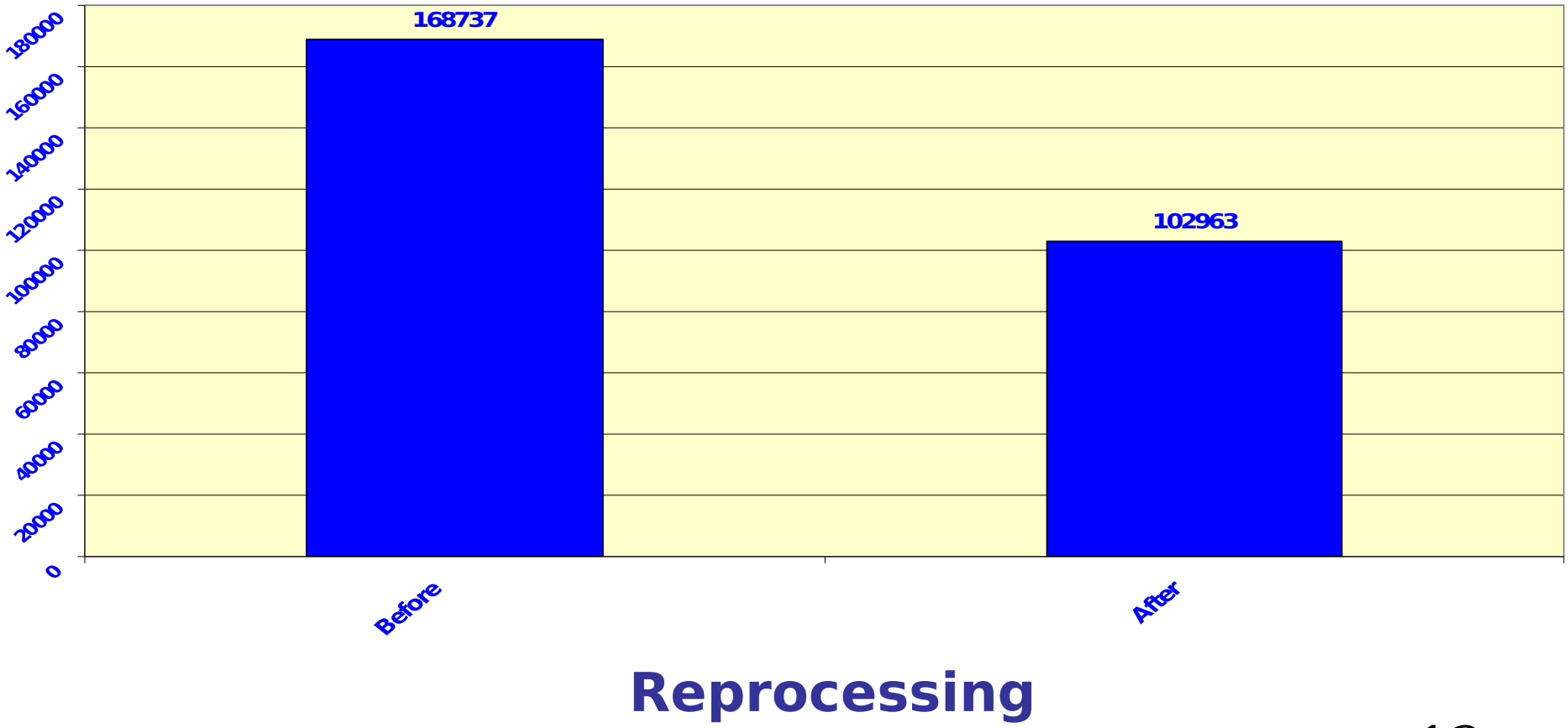
After Mismatch Reprocessing



Total Mismatch Types

- Resolved 65,774 Mismatch Type Codes
- OR 39%

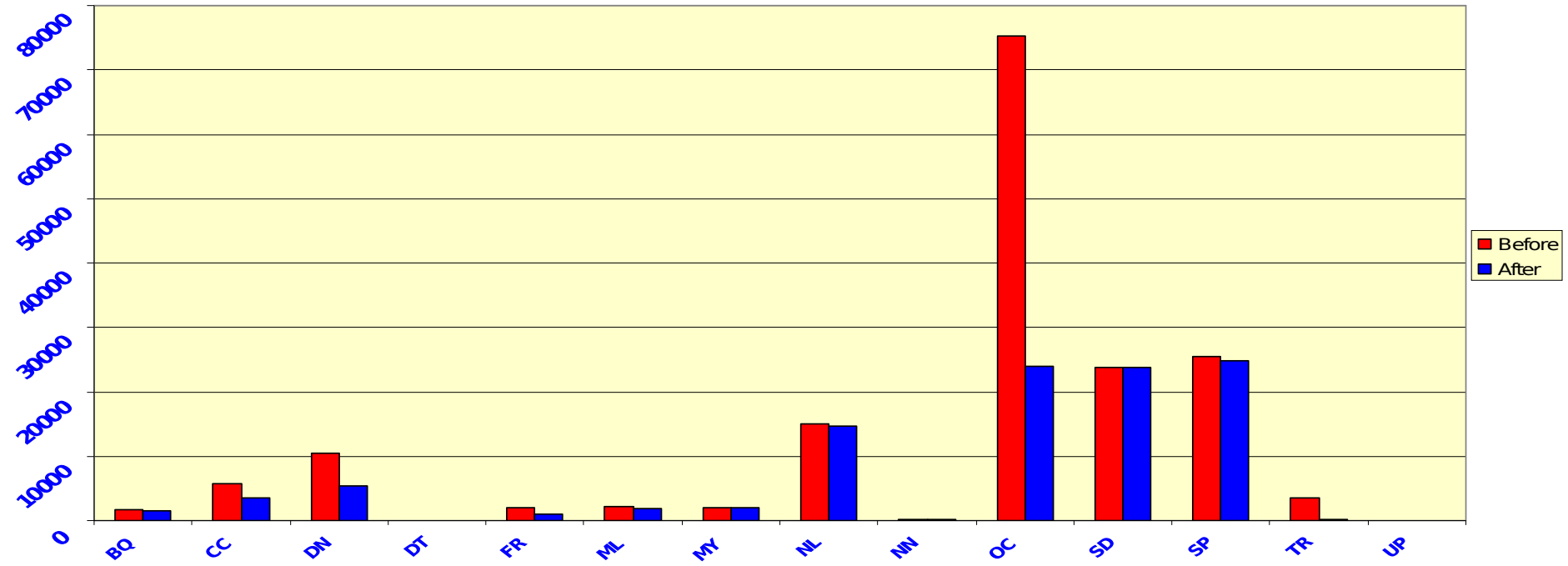
Mismatch Type Codes



Mismatch Type Code Detailed View

- Supports numbers in a previous graph that most Ownership Code mismatches were Receipts (46%) affected by IMACS 5.3 release
- “MY” and “ML” (IMACS 5.1 & 5.2 releases) remain low
- Numbers becoming more manageable

Mismatched Transactions



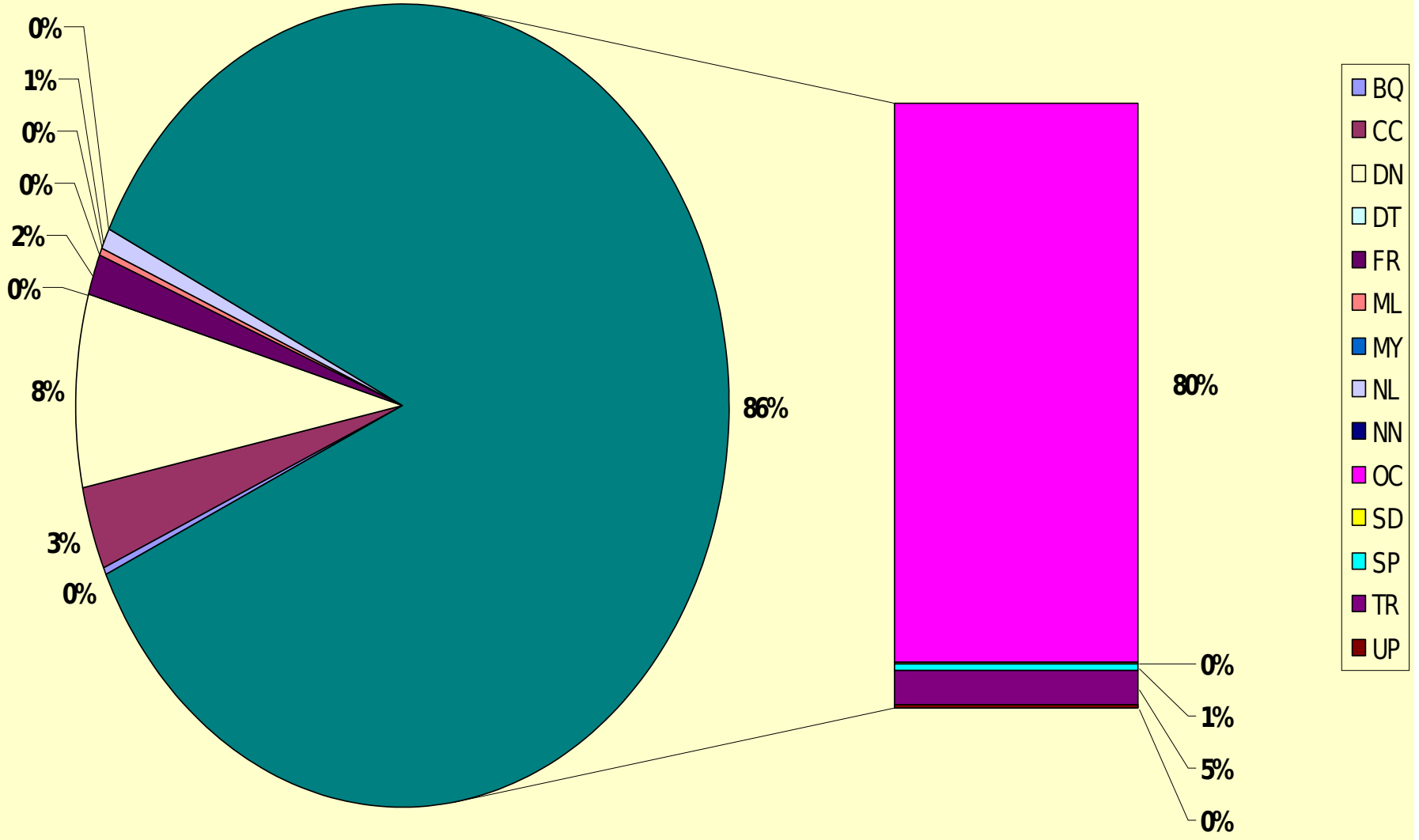
	BQ	CC	DN	DT	FR	ML	MY	NL	NN	OC	SD	SP	TR	UP
Before	1619	5753	10483	17	2080	2124	1956	15021	212	75261	23842	25471	3475	1
After	1522	3600	5465	3	969	1885	1982	14623	233	23968	23749	24803	160	1

Mismatch Type Codes

Mismatched Transaction Reprocessing Differences

- Majority of Mismatches resolved were Ownership Code (OC)
- Surprisingly, Document Number/NSN (DN) mismatches were a far off #2

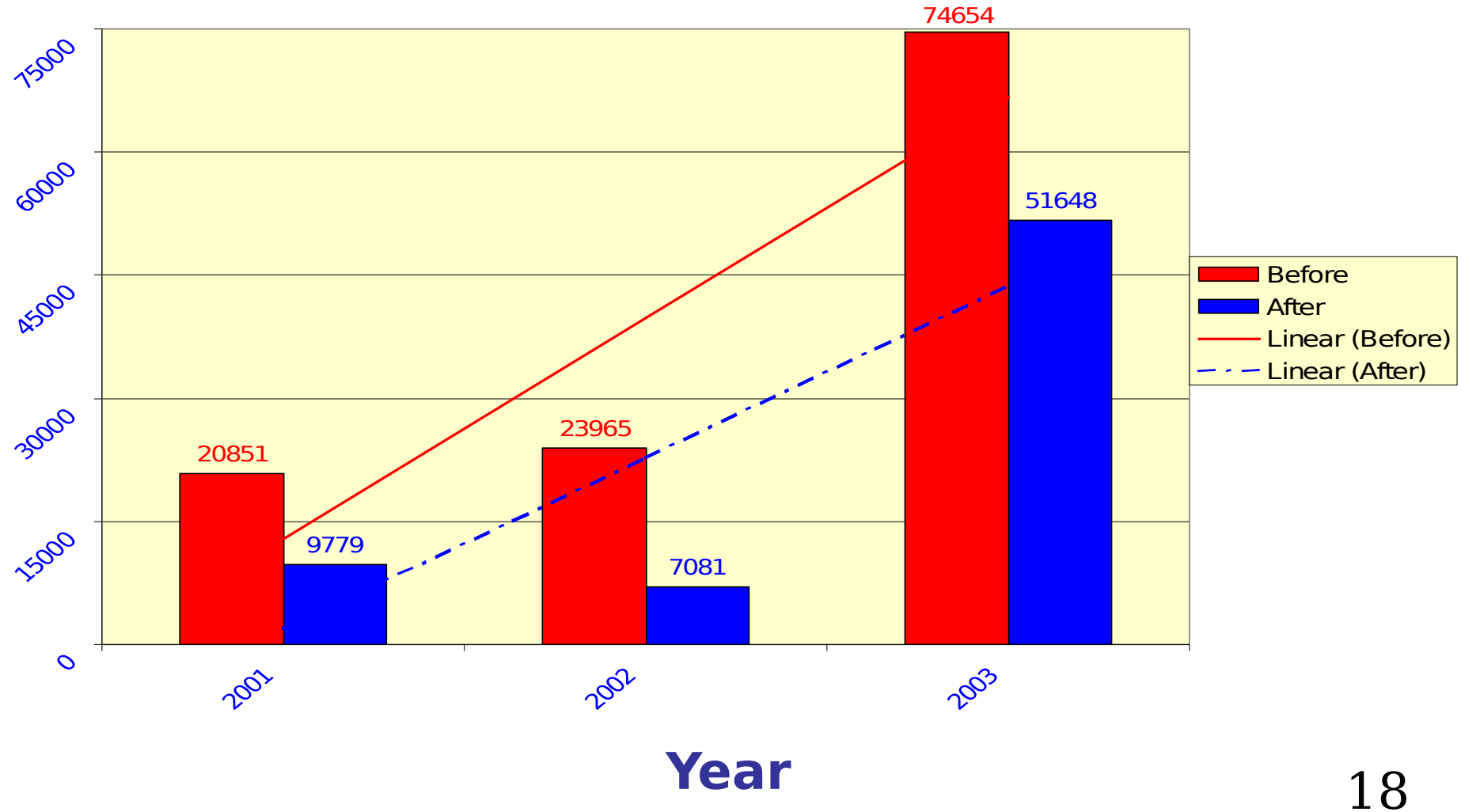
Mismatch Code Reprocessing Differences



Transaction Mismatches Yearly Reprocessing

- Trend Lines
  - **RED** (Before Processing)
  - **Blue** (After Reprocessing).
- After trend line lies below the before line, implying improvement/reduction of mismatches remaining
- Began Receiving DSS transactions from all services' Depots in 2003
- Contained large number of duplicates

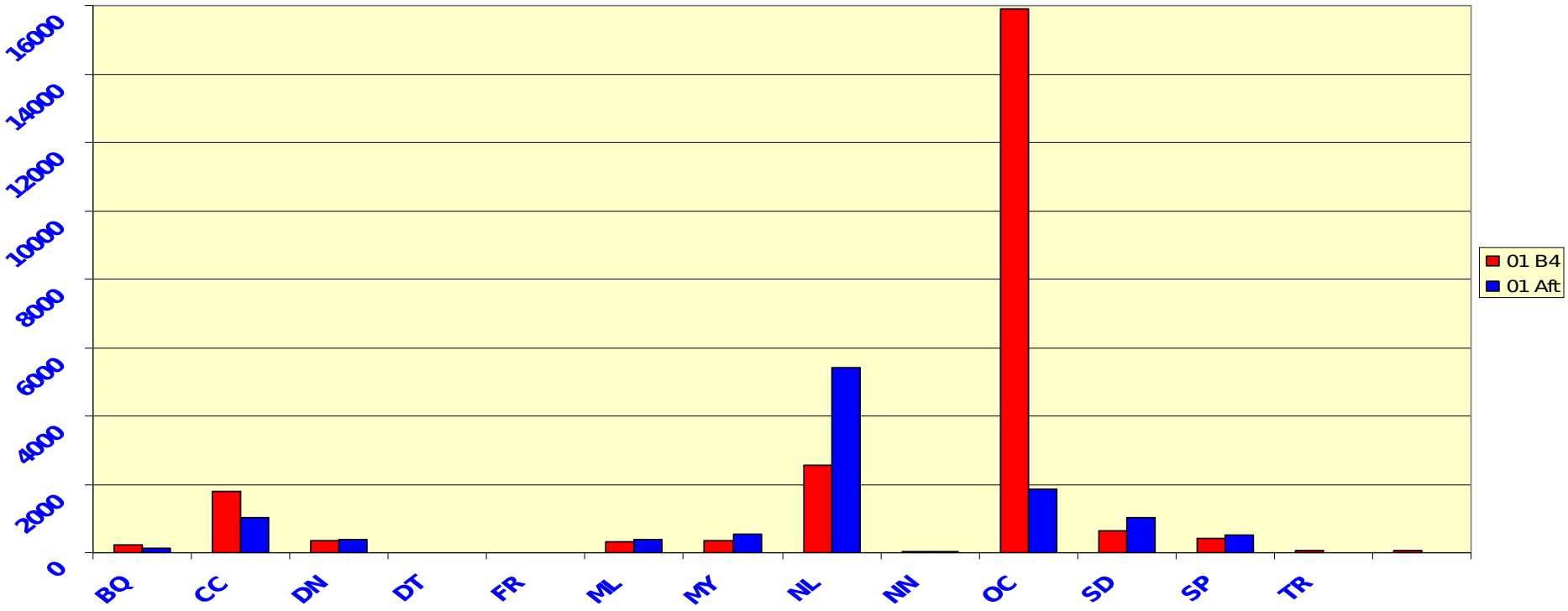
Mismatched Transactions



2001 Mismatched Transaction Reprocessing Results

- “CC” mismatches were reduced by 43%
- “NL” mismatches doubled (+53%)
- Significant Decrease in “OC” mismatches (88%)
- Overall, a 50% Reduction of 2001 mismatches

2001 Mismatch Transactions



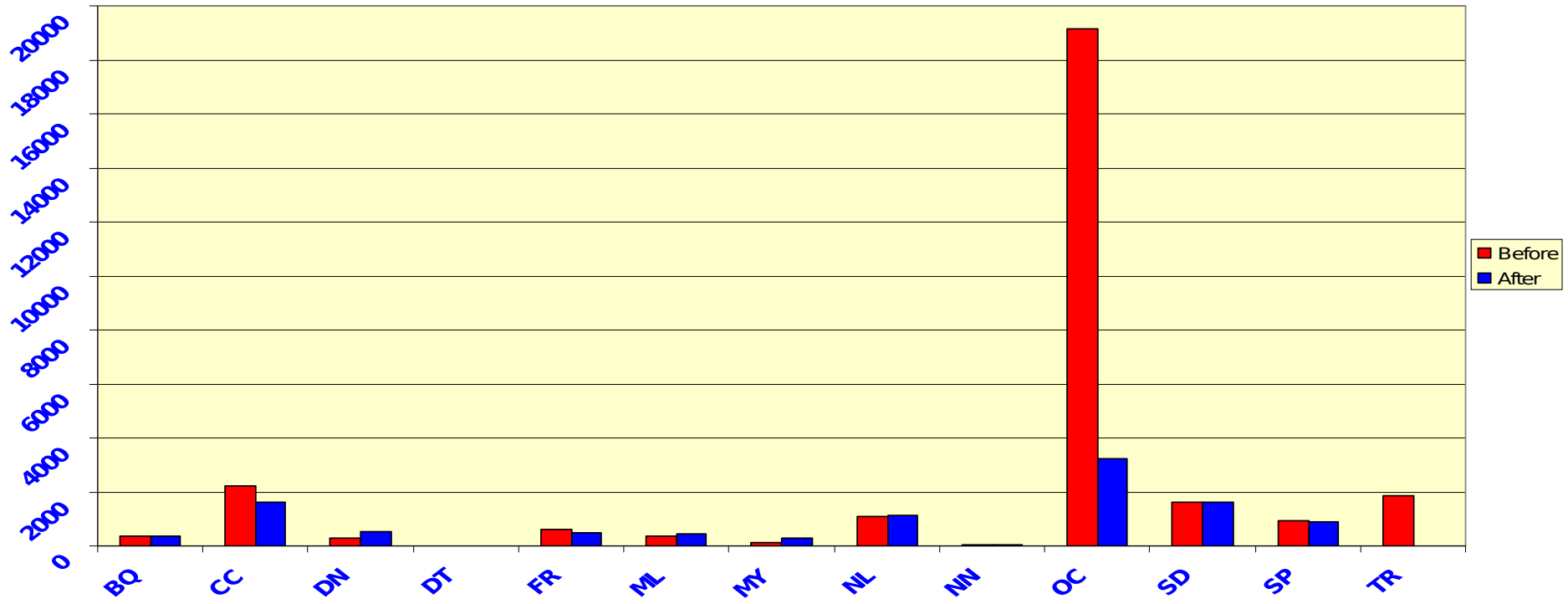
	BQ	CC	DN	DT	FR	ML	MY	NL	NN	OC	SD	SP	TR	
01 B4	228	1805	366	13	1	330	365	2548	35	15898	647	418	52	67
01 Aft	116	1037	383	1	1	377	541	5418	35	1853	1018	517	5	0

Mismatch Type Codes

2002 Transaction Mismatch Reprocessing Results

- Minor Increase in:
  - “MY”
  - “ML”
  - “NL”
  - “SD”
  - “SP”
- Significant Decrease in “OC” (83%)
- Overall, a 63% Reduction in 2002 mismatches

2002 Mismatched Transactions



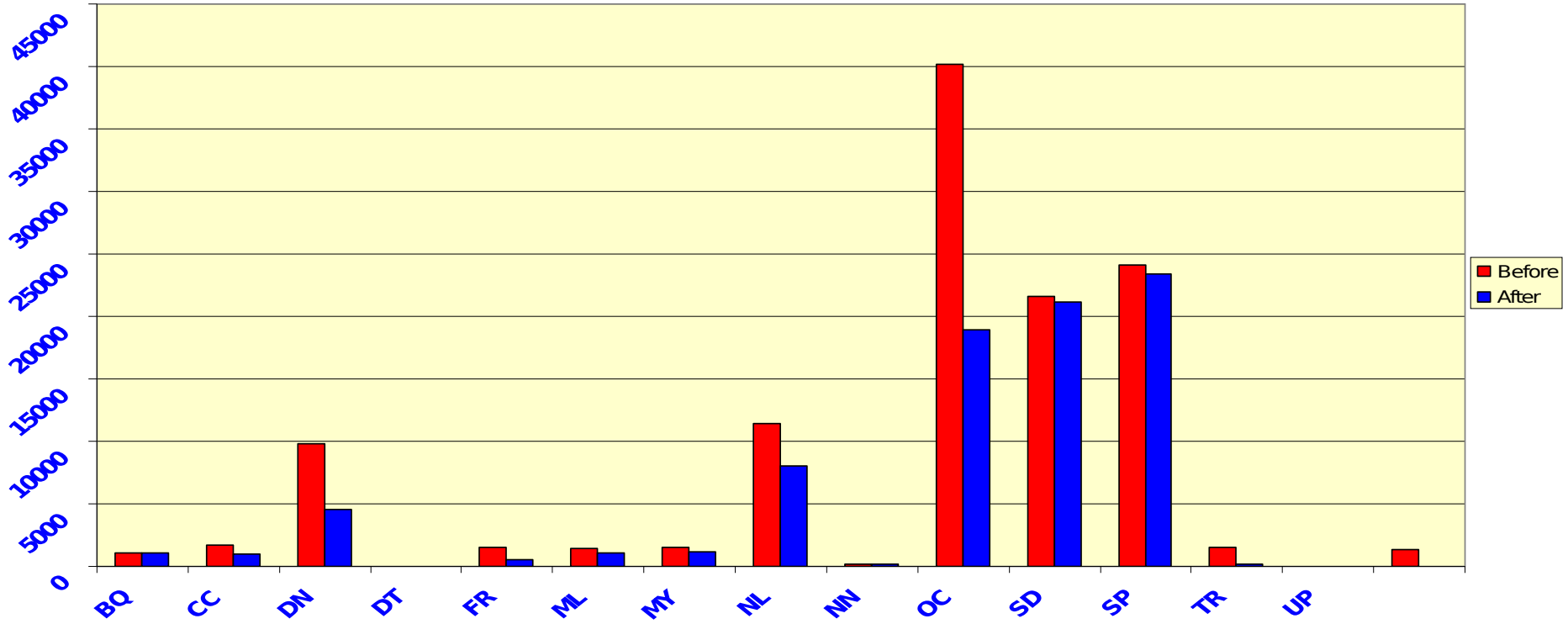
	BQ	CC	DN	DT	FR	ML	MY	NL	NN	OC	SD	SP	TR
Before	353	2232	283	3	597	371	112	1077	23	19169	1620	924	1872
After	353	1607	509	1	473	430	299	1140	23	3229	1611	891	11

Mismatch Type Codes

2003 Mismatched Transactions Reprocessing Results

- Significant Impacts in areas of:
  - Document Number (DN)
  - No Line Item (NL)
  - Ownership Code (OC)
- Problem areas:
  - Source/Document Number DoDaac (SD)
  - Supplementary DoDaac (SP)

2003 Mismatched Transaction Reprocessing



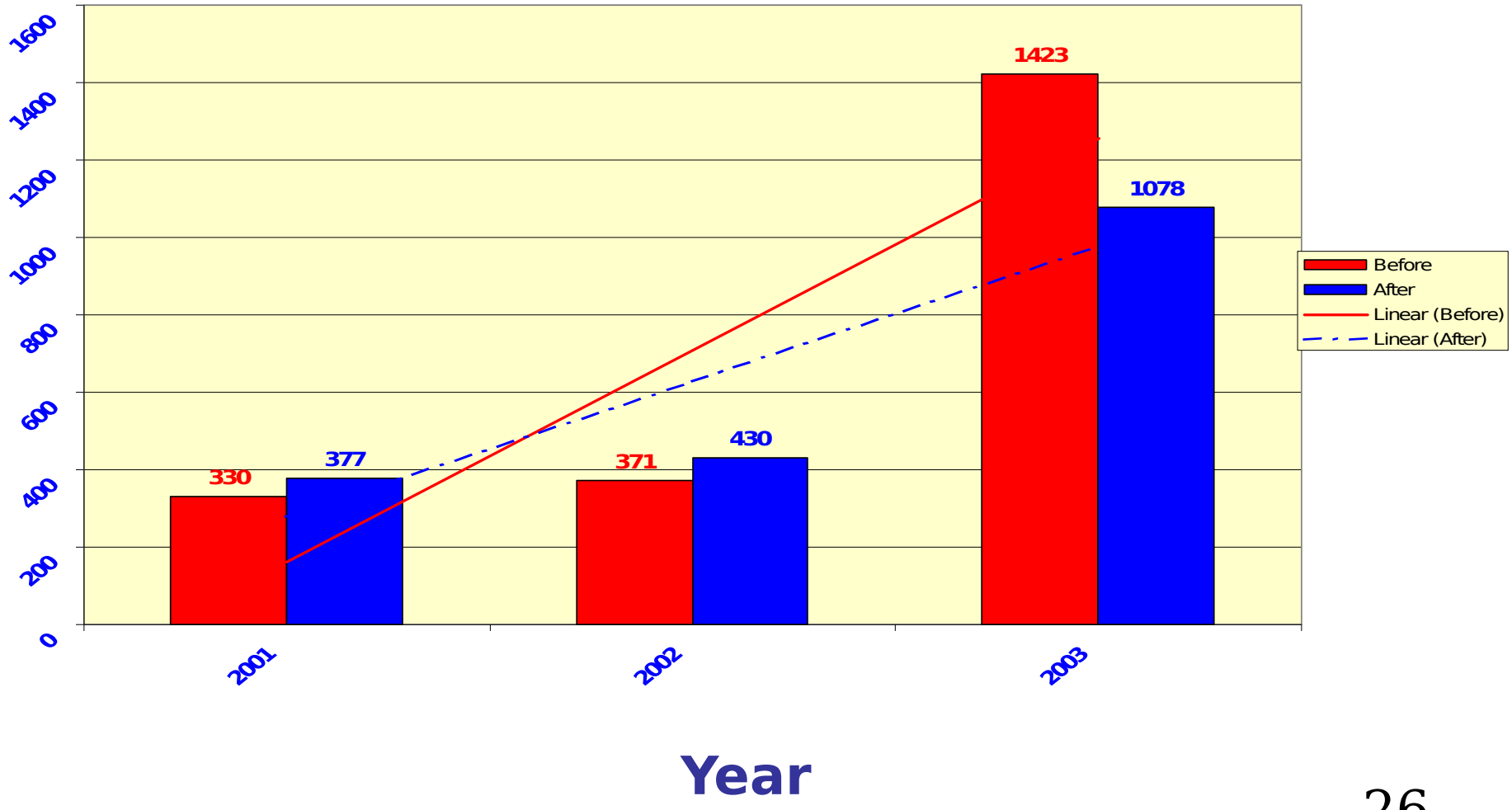
	BQ	CC	DN	DT	FR	ML	MY	NL	NN	OC	SD	SP	TR	UP	
Before	1038	1716	9834	1	1482	1423	1479	11396	154	40194	21575	24129	1551	1	1355
After	1053	956	4573	1	495	1078	1142	8065	175	18886	21120	23395	144	1	0

Mismatch Type Codes

Multiple Line Item – “ML” – Reprocessing Trend

- Small Increase in number of “ML” mismatches
- Overall, minimal number of mismatches
- Trend is an increase of “ML” mismatches from year to year as more transactions are pulled into IMACS.
- Comprise 3% of Mismatches remaining in IMACS.

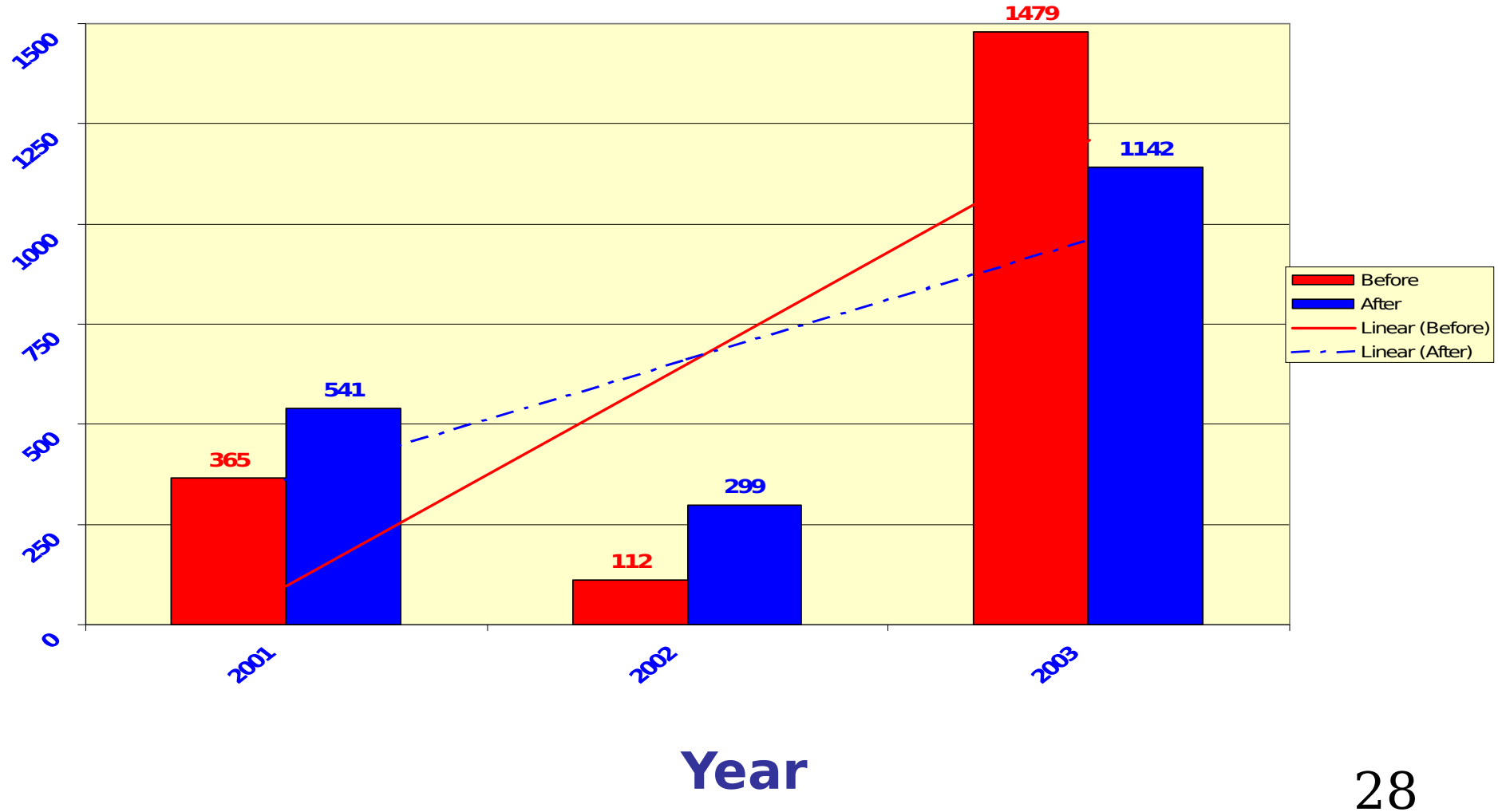
“ML” Mismatched Transactions



Multiple Year – “MY” – Reprocessing Trend

- Increases in “MY” mismatches from year to year
- Overall, minimal number of mismatches
- Trend is an increase in number of “MY” mismatch types.
- Comprise 3% of Mismatches remaining in IMACS

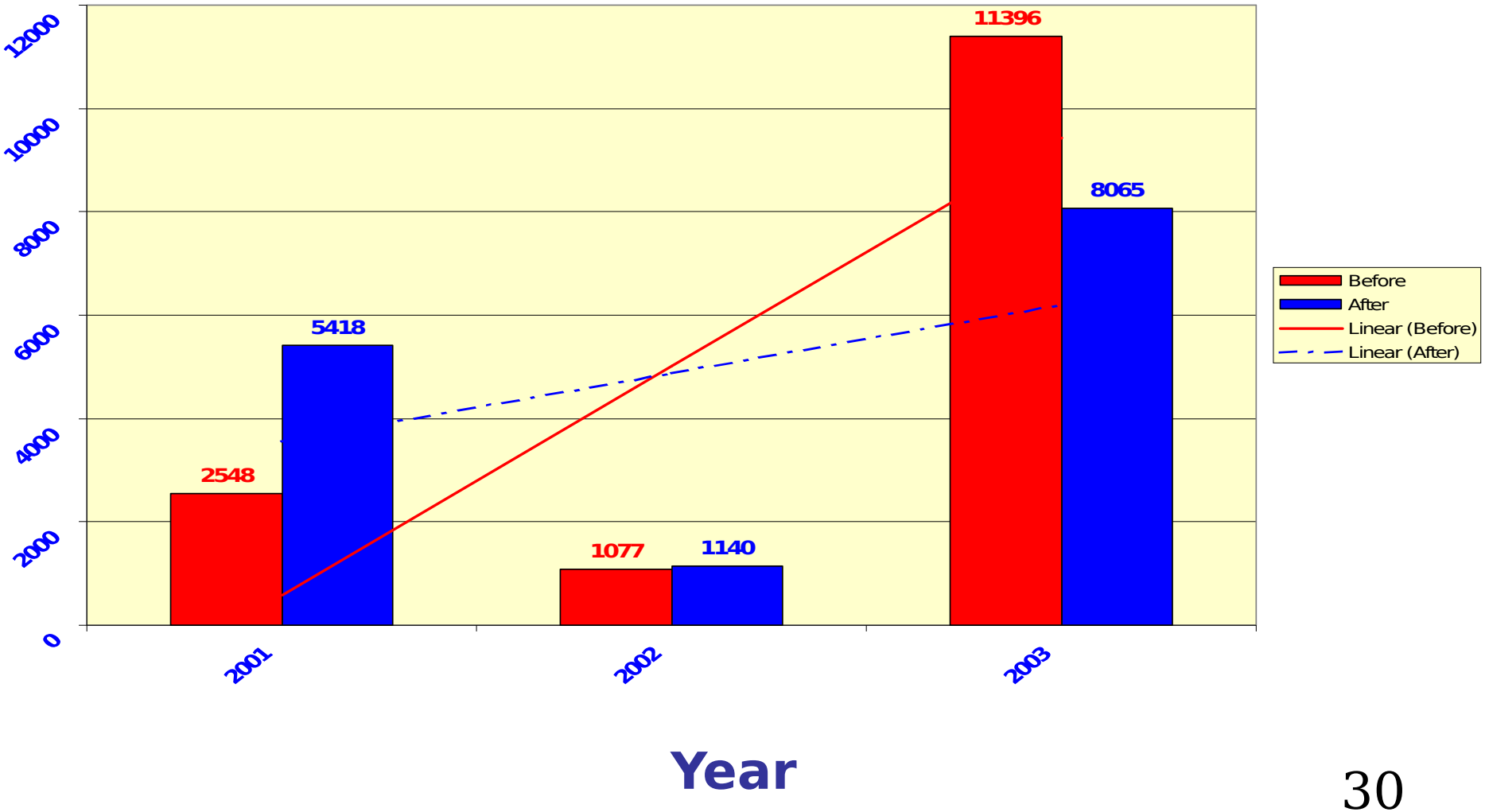
“MY” Mismatched Transactions



No Line Item – "NL" – Reprocessing Trend

- 53% increase in 2001 because of DMISAs deleted.
- Almost no change in 2002
- Significant increase in 2003, but reprocessing resulted in a 30% reduction
- Comprise 16% of Mismatches remaining in IMACS

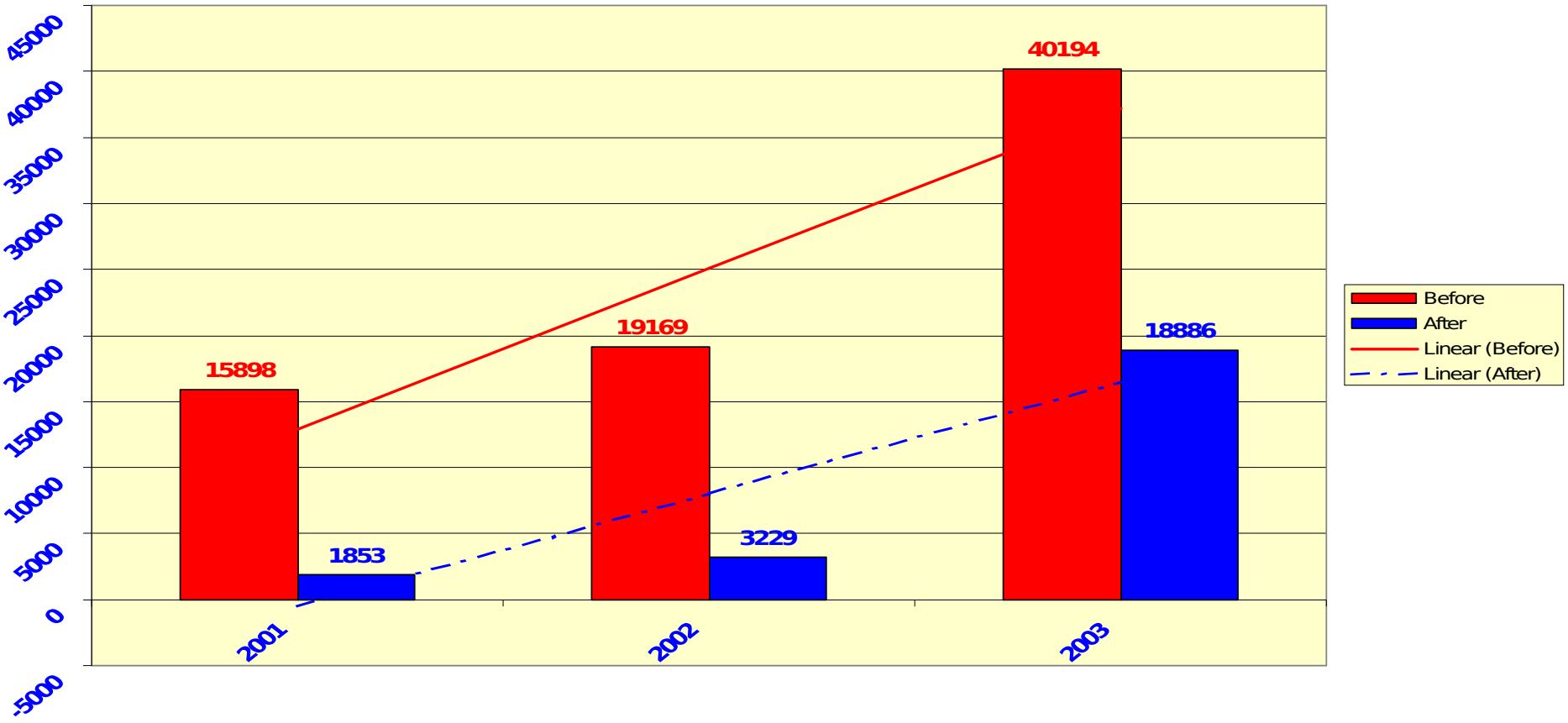
“NL” Mismatched Transactions



Ownership Code – “OC” – Reprocessing Trend

- Significant Reduction in “OC” mismatches:
  - -88% in 2001
  - -83% in 2002
  - -53% in 2003
- 2003 number remains high
- Overall, a 68% Reduction in “OC” mismatches
- Comprise 87% of Mismatches remaining in IMACS

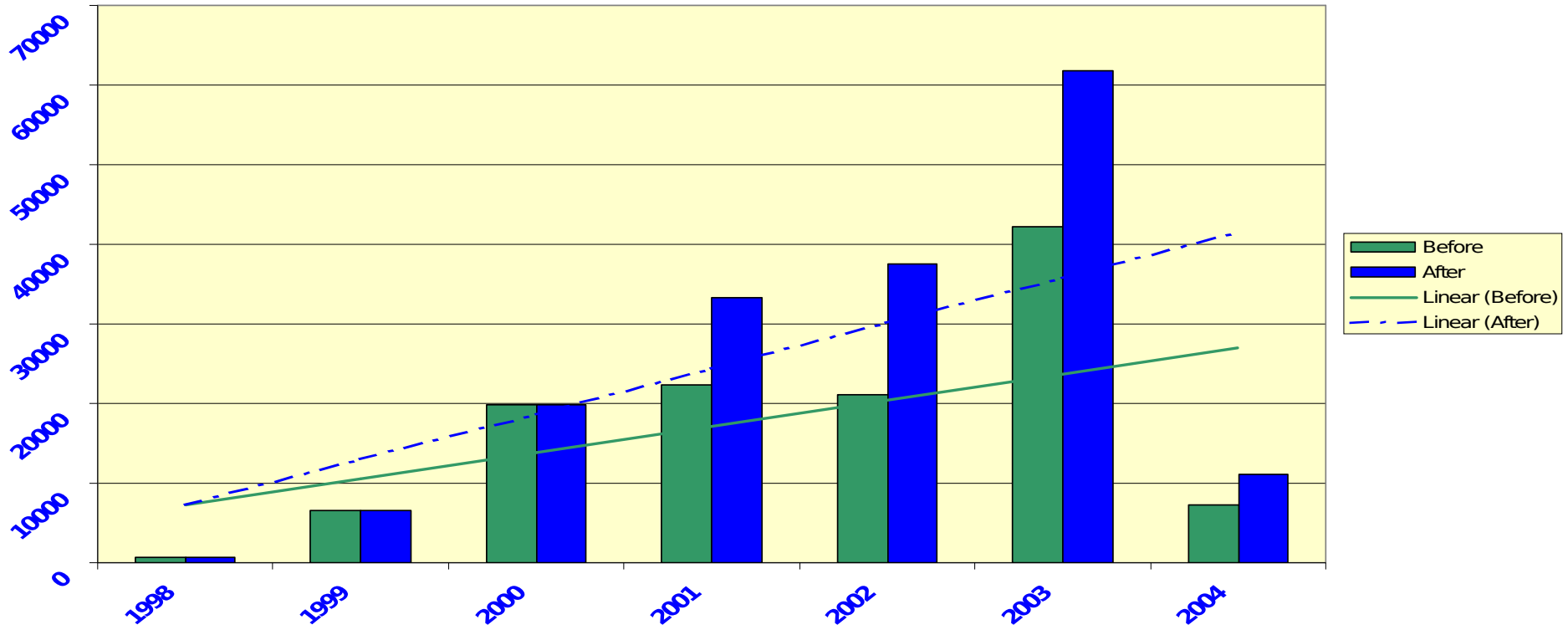
“OC” Mismatched Transactions



Posted Transactions Reprocessing Trend

- Years 1998 – 2000 were not reprocessed therefore Before and After numbers are unchanged
- Reprocessing Resulted in More Postings
- “After” Trend Line is above the “Before” line with an upward slope implying more posting in years to come.

Posted Transactions



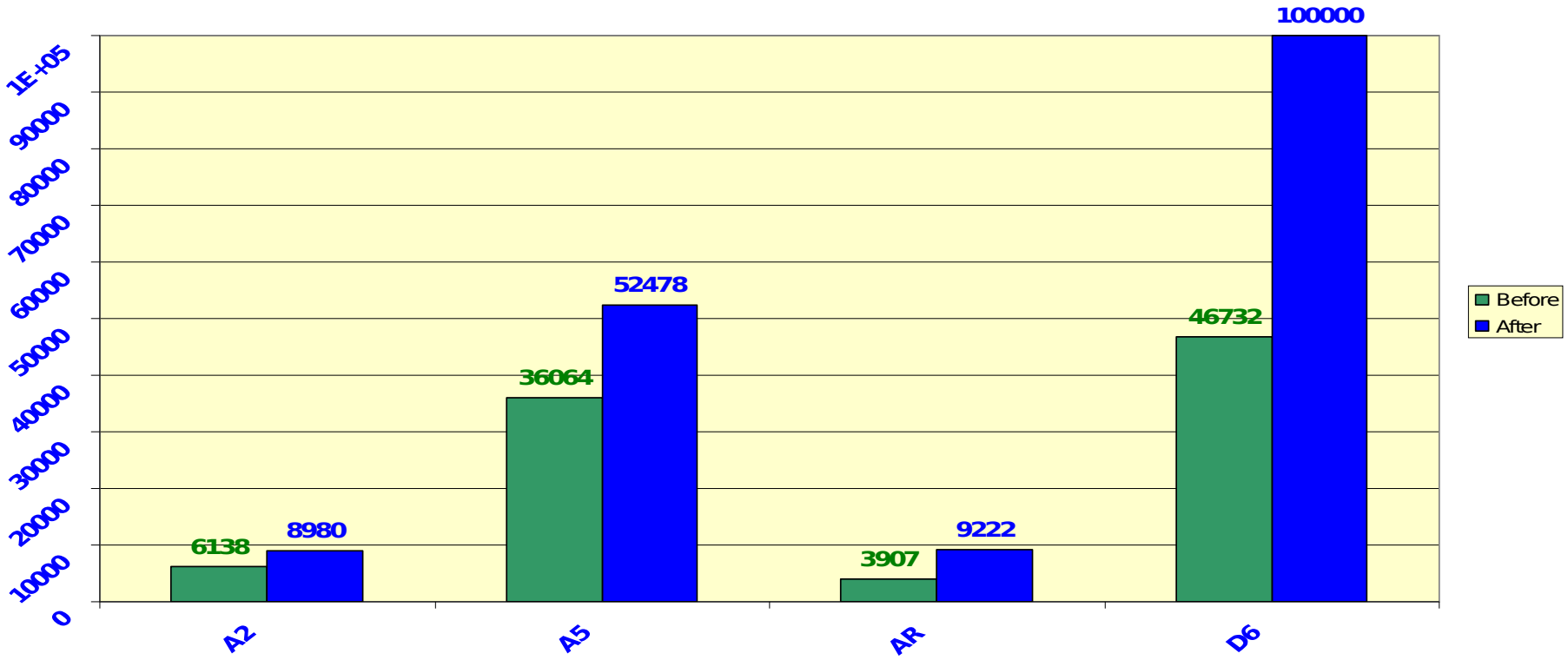
	1998	1999	2000	2001	2002	2003	2004
Before	643	6602	19860	22323	21107	42137	7274
After	643	6602	19860	33270	37471	61713	11121

Year

Posted Transactions Detailed View

- The Number of Posted Receipts and Confirmations Doubled (+114%, +136%, respectively)
- Confirmations increased by 45%
- Enhancements (IMACS 5.1, 5.2, & 5.3) and Reprocessing significantly improved asset visibility.

Posted Transactions

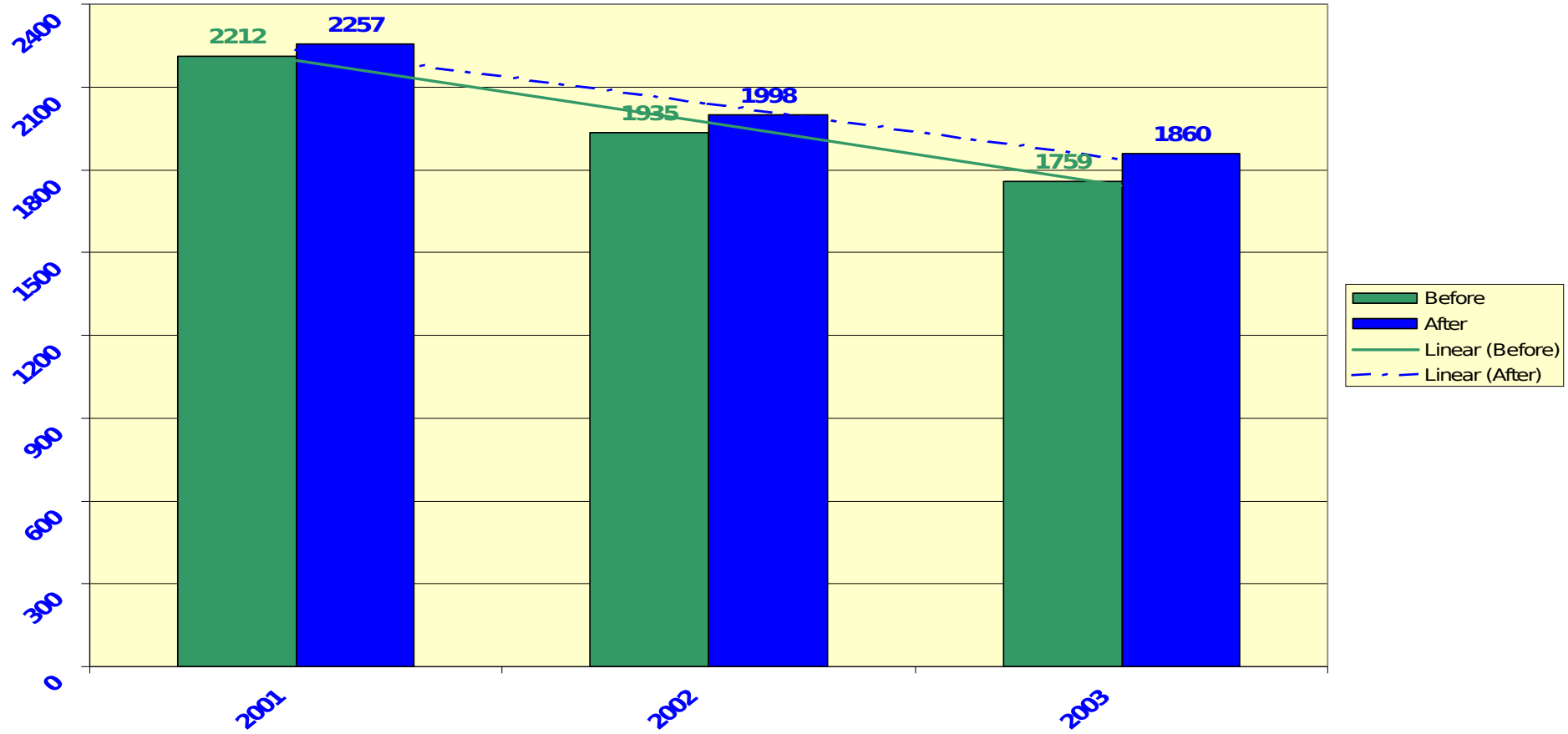


Document Identifier Code

Posted Material Redistribution (A2_) Transactions

- No Enhancements that targeted A2 transactions specifically
- Minor Improvement after Reprocessing
- Less Posted A2 transactions in IMACS is the current trend

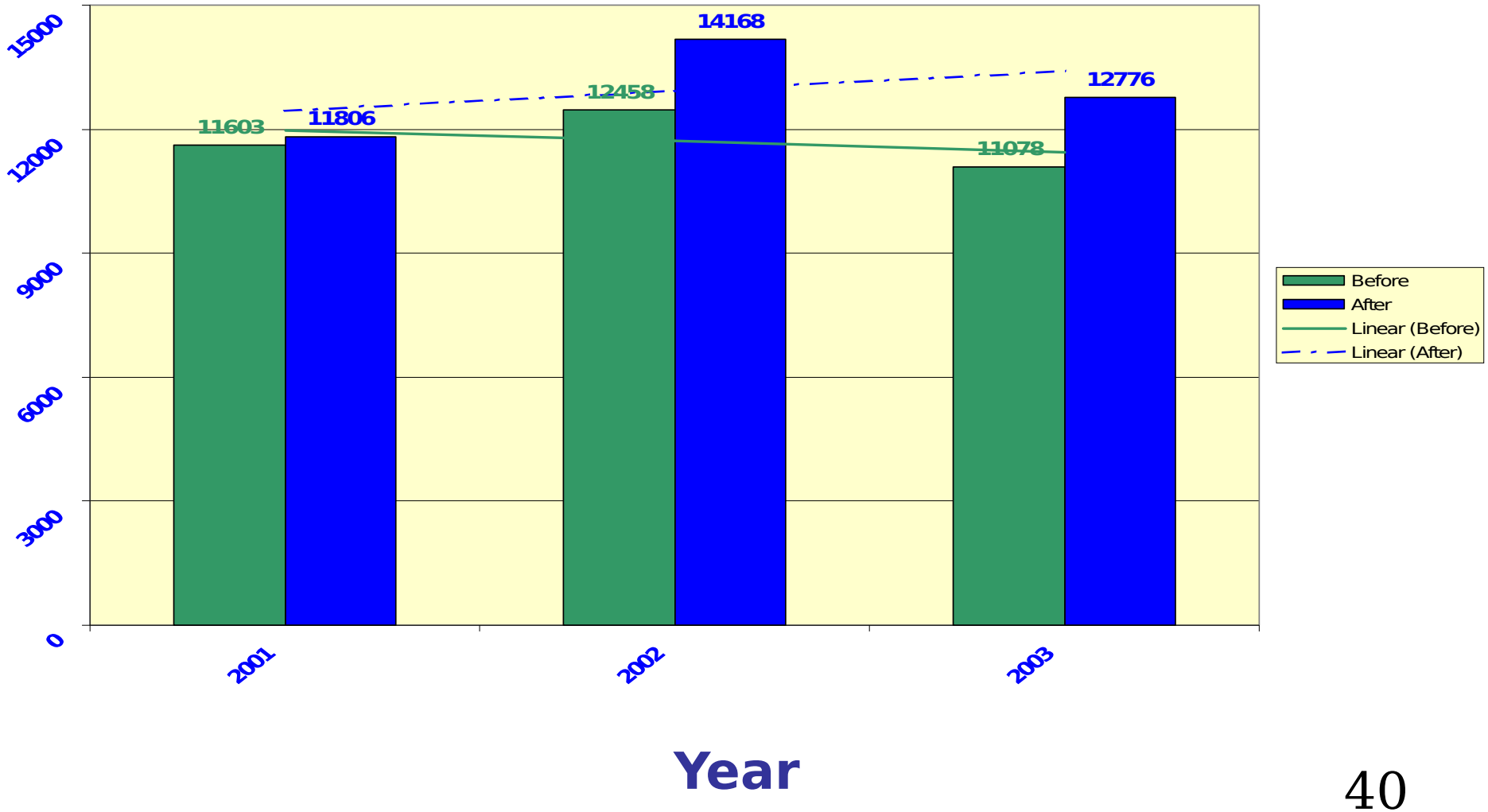
Posted Material Redistribution



Posted Material Release Order (A5_) Transactions

- Fair Asset Visibility Improvement after Reprocessing
- More Postings of A5 transactions in the Military Logistics systems is the current trend

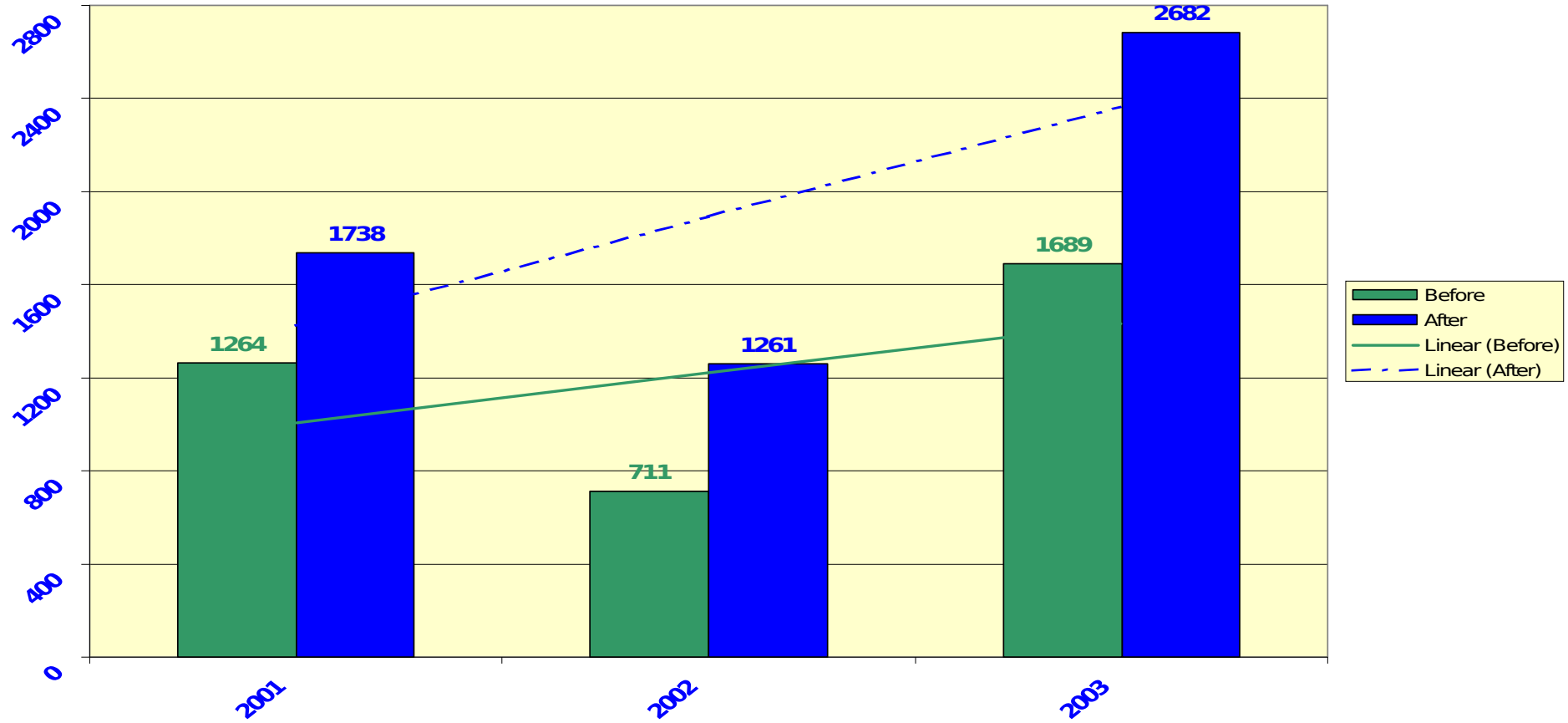
Posted Material Release Order Reprocessing Trend



Posted Material Confirmation (AR_) Transactions

- Enhancement (IMACS 5.2a) which targeted AR transactions shows improvement in Asset Visibility
  - +38% in 2001
  - +77% in 2002
  - +60% in 2003
  - Averaging a +55%

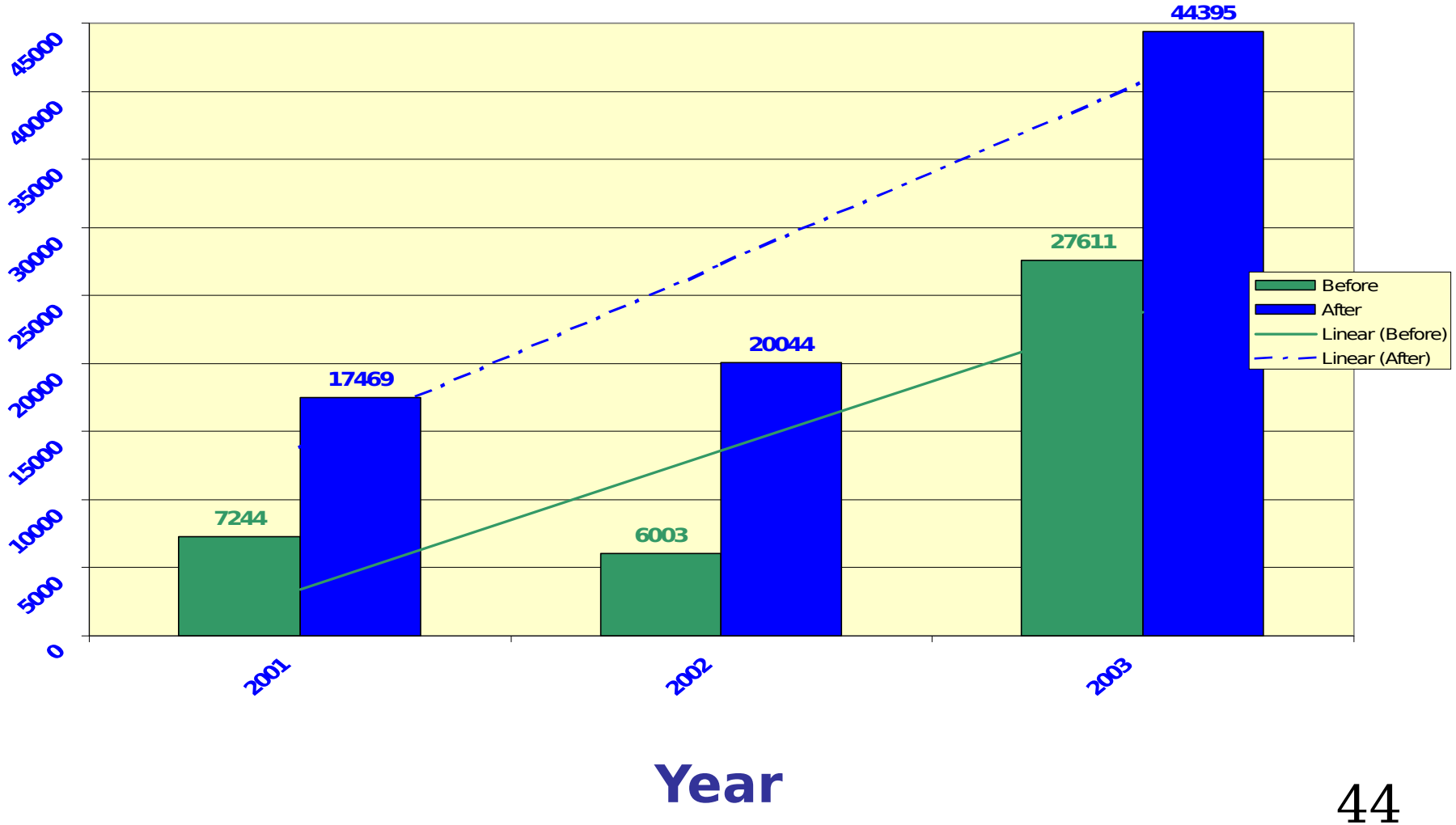
Posted Material Confirmation Reprocessing



Posted Material Receipt (D6_) Transactions

- Enhancement (IMACS 5.3) which targeted D6 transactions shows improvement in Asset Visibility
- +141% in 2001
- +234% in 2002
- +61% in 2003
- Averaging a +100%

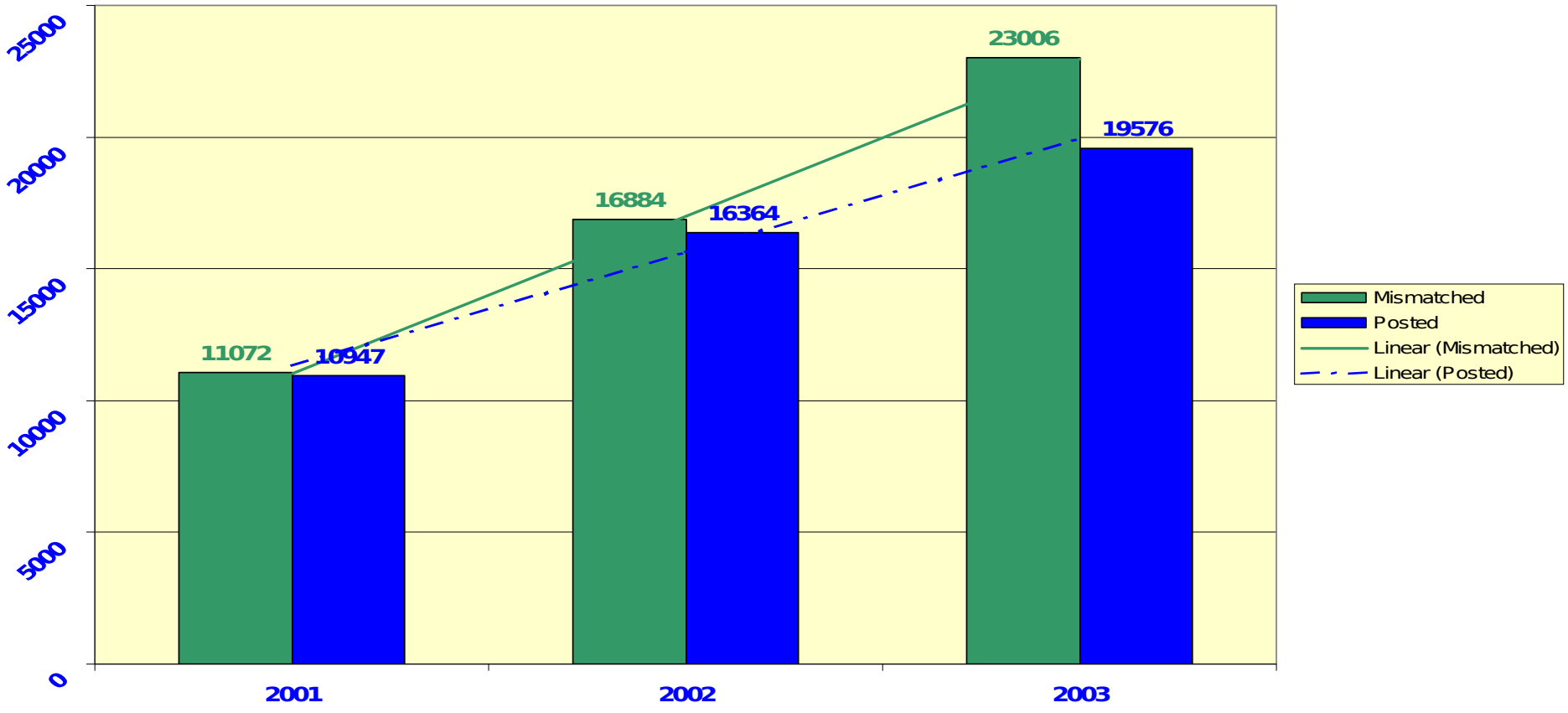
Posted Material Receipt Reprocessing Trend



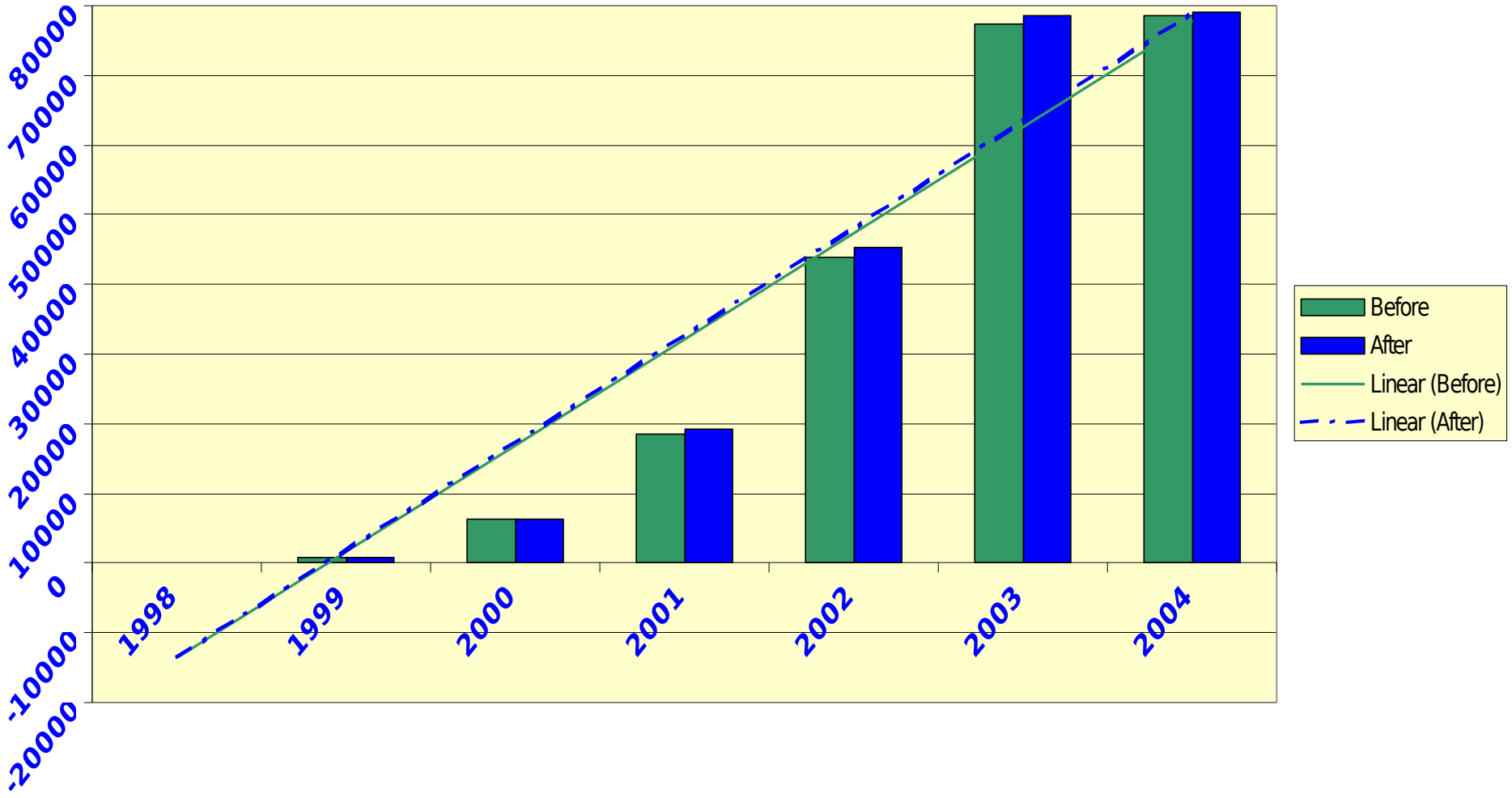
Mismatches vs. Posted Transactions

- Almost a 1:1 for 2001 and 2002
- Difference in 2003 shows the number of transactions deleted (Duplicates)
- The trend is the more mismatches are resolved the more are posted.

Change in Mismatches vs Posted Transactions Trend

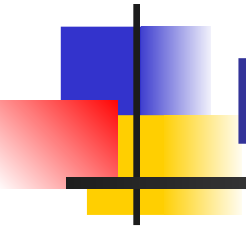


Special Shipping Instructions



	1998	1999	2000	2001	2002	2003	2004
Before	17	745	6309	18477	43842	77331	78556
After	17	745	6315	19138	45229	78488	79070

DMISA Year



Transaction Processing Metrics

Presented by

Northrop Grumman